Physical and Mental Well-being in Urban and Rural Communities:
Impact of Non-Medical Factors on Limited Resource Families
University of Maryland Gemstone Medical Care Team
Angela Bien, Jamille Bigio, Eric Buchner, Christine Compton,
Rachel Markus, Ellen Massey, Stephen Mihalcik, and Michael Soracoe

Abstract
How do knowledge of community resources, food security, and satisfaction with the community relate to physical and mental well-being in urban and rural environments? In the context of limited-resource mothers in Washington, DC, and two rural Maryland counties, we found that each is linked in interesting modes of interconnection. We explored these relationships, quantitatively and qualitatively, to illustrate a more complete picture as a basis for program and public policy decision making.

Background
Numerous models seek to predict the health of a community. In this study, the population health model is of primary interest. It states that health in human societies is significantly influenced by the wealth-generating capacity of a country and the way in which this wealth is distributed. Some of the central assertions of the model are as follows:

- The major determinants of human health status are cultural, social, and economic factors at both the individual and population levels.
- These factors are independent of medical care input at the population [not the individual] level.
- Societies that enjoy a high level and relatively equitable distribution of wealth enjoy a higher level of health status.

At the individual level, health status is determined by the social and economic environment and the way in which this environment interacts with individual psychological resources and coping skills (Beaglehole, 2002, p. 84). This model suggests health is influenced by a great deal more than just access to and receipt of medical care. The investigation of this model has therefore become a serious part of academic research, especially during the last decade.

Psychosocial factors are among the most likely explanations for the disparities in health among different socioeconomic level groups. The stresses of economic insecurity may negatively affect wellness and induce individuals to make unhealthy lifestyle choices such as taking up smoking. On the opposite side of the spectrum, social contacts and community networks have been shown to substantially lower the rate of mortality when compared to individuals who lack both. What is perhaps most interesting is that the risks posed by the lack of social support networks are not concentrated in one particular area of health, but scattered across many different causes of mortality (Berkman, 1995).
Two other non-health factors shown to possess a significant influence on individual well-being are nutrition and food security. While it has long been known that a balanced diet contributes positively to health status, what has not been investigated until recently is the effect of an individual’s surrounding environment upon nutrition and food security. Studies have demonstrated that societal and environmental factors have an influence upon food patterns and may pose serious risks to health. Nutrition and food security are affected by more than just personal preference for different foods; nutrition also encompasses “the social, economic, and cultural issues related to making the right food choices and to purchasing and eating the ‘correct’ types of food in the ‘appropriate’ quantities, as well as the factors that determine this aspect of essential daily human activity and behavior” (Shetty, 2002, p. 149).

The problems created by the non-health factors influencing health are exacerbated by other barriers to accessing health care, such as limited transportation, which frequently limits individuals' ability to access the health care resources that are at their disposal. In rural areas, transportation issues often involve lack of access to both private and public transportation, while, in urban areas, the issues involve public transportation use. Rural residents often must travel longer distances to providers, which presents even greater barriers to patients requiring services for disability or home health care (HHS Rural Task Force, 2002).

Cultural characteristics of geographic regions also impact barriers to accessing care. Populations of rural areas are often older, poorer, and less healthy than their urban counterparts (Rodriguez, 2001). The smaller populations of rural areas often lead to stronger social networks and greater familiarity among residents. This familiarity can be detrimental when it creates a lack of privacy and a fear of stigma associated with such services as mental health care and substance and physical/psychological abuse treatment. It is also contrasted by some rural communities’ value of independence and individualism, which may lead them to resist utilizing available services (HHS Rural Task Force, 2002). This hesitancy then leads to illnesses that are further progressed and require higher acuity of care (Rodriguez, 2001). Such characteristics cannot be generalized for all rural areas, as these areas often differ greatly in their populations, with characteristics varying by region (HHS Rural Task Force, 2002).

There are a number of obstacles that prevent individuals from taking advantage of available medical care, but these obstacles are further compounded for mothers with young children. For these mothers, obtaining health care also necessitates navigating the difficulties in obtaining childcare, in taking time off work, and in obtaining transportation to the health care site. These factors complicate health care access both for the mother and for her children.

Recent Findings/Discussion
Looking at the three selected variables – knowledge of community resources, food security, and satisfaction with community – we see an intricate model of support and constraint both between the selected factors themselves and between the factors and physical and mental well-being. To analyze these relationships we examined them one by one.
Knowledge of Community Resources

Statistical analysis shows the overall well-being of the study's urban participants was linked to their knowledge of the resources available to them. For the urban sample, correlations revealed that the less the mothers knew about community resources, the more likely they were to have health problems that interfered with daily life and the worse their self-reported health. Among the rural sample, there was a negative correlation between their status on the depressive scale and the proportion of resources of which they were aware. The more depressed the interviewees were, the less they were aware of the resources available to them, suggesting that the mental health of the target population may serve as a barrier to successful public awareness campaigns. The mothers’ knowledge of community resources is significant both at the overall level and the specific resource level. Both urban and rural groups reported variation in their knowledge of specific resources, with great overlap in the areas of highest knowledge (child immunization, food stamps, and WIC).

Food Security

The urban data shows not only that a mother’s health is likely to decline when she is food insecure, but also that overall health is likely to improve when she has the ability to get the quantity and types of foods that she desires. This correlation was not found among rural mothers, although there was a positive correlation between their number of depressive symptoms and their level of food insecurity, such that the more depressive symptoms they had, the more they were food insecure. At the same time, there was a positive correlation between the number of depressive symptoms and the number of health problems, so that those who reported greater levels of depression also reported poorer physical health. In the urban sample, decreased risk of food insecurity was related to fewer instances of emotional problems interfering with daily activities, and was 100 percent correlated with not “cutting down the amount of time spent on work or other activities.” These findings point to the relationship between food security and mental health, linking them to an individual’s ability to productively function in a given day. This productivity is key for many mothers juggling work, personal, and familial responsibilities.

Although 60 percent of the urban mothers are only marginally food secure and 38 percent of the rural mothers are food insecure, one hundred percent of the urban mothers and 77.10 percent of the rural mothers reported knowing of food stamps and WIC. We must examine why knowledge of community resources is not translating to utilization of such services. The
literature and our qualitative research suggest that elements relating to satisfaction with community may present these barriers, including stigma, transportation, and childcare. For example, one urban participant reflected that, when growing up, her mother would “rather they starve” than accept welfare.

*Satisfaction with Community*

To analyze our third selected variable – satisfaction with community – we look at community as incorporated by the physical neighborhood and the social network of friends and family. Statistical analysis showed that high satisfaction with the neighborhood correlated with both improved physical and mental health. Within the urban sample, mothers who reported satisfaction with their community also reported their health as in an improved state from the previous year, few physical limitations in their daily activities, and positive mental health. Mothers in both the rural and urban samples reported a range of experiences in their communities that affected different arenas in their lives that we look at in the qualitative analysis.

In the rural sample, there was a negative correlation between where they fell on the depressive scale and what level of social support they felt they received. The more depressive systems they exhibited, the more likely they were to receive low social support. There was no correlation between physical health and social support, nor was data significant among the urban sample. Social support may affect utilization of social services in both supporting and constraining manners, as social networks may offer childcare and transportation options and may spread knowledge of resources through word of mouth, but they may also result in a fear of stigma that prevents service utilization.

*Suggestions for Policy*

Within the reality of limited health care resources to be distributed throughout society, the value of health exceeds its normative worth through the implication that a healthier individual requires fewer resources and may potentially contribute more to the society, effectively increasing available resources. In this context, it is essential to direct funds and services to the areas where they will be most effectively utilized to increase health status. As this study has suggested, these essential areas include improving patients’ knowledge of community resources, food security, and satisfaction with community, both in urban and in rural areas. Our recommendations target these goals through public awareness campaigns, more effective service options, and greater cultural competence in care provision.

*Public Awareness*

The study’s statistics emphasize the importance of public awareness. The health care safety net's magnitude and inclusiveness is not valuable to its constituency, the underserved, unless those who need care are made aware of its availability and are given the tools necessary for utilizing the resources. A mother may know of a resource but may not be able to access it, as a result of such obstacles as transportation costs and childcare, in addition to other barriers we explore in our literature review. This is one manner of linkage between the three factors on which we focus, as satisfaction with community incorporates such elements as transportation and childcare, and in this manner interacts with knowledge of community resources in their effect on physical and mental well-being.
Services and Cultural Competency

It is possible and important for providers to play a larger role in their patient's health than just treating a disease, though disease treatment cannot be ignored. By offering or assisting patients in improving their situations outside of traditional medicine, especially in improving their food security, knowledge of community resources, and satisfaction with the community, the provider could play another important role in the client's health. Encouraging health care providers to offer services that assist the clients that are lacking in these areas could play a role in community health. To provide effective services, programs must be conducted in a culturally competent manner.

Suggestions for Further Research

We believe that our results indicate that the health care safety net could improve its effectiveness by addressing the relationship between non-medical factors and their impact on physical and mental well-being, both in urban and rural areas. Based on these findings, we suggest that a larger study further explore our research question with more individuals and more resources than were available to our study, so that more conclusive recommendations may be offered. We hope that, in further pursuing this direction of research, more effective routes of care may be identified that will allow us to direct our nation’s resources in manners that ensure all have the opportunity to enjoy the right to physical and mental well-being.
Bibliography


Note on Research
Rural data for this research come from the USDA multi-state, longitudinal research study NC223: “Tracking the Well-being of Rural Low-Income Families in the Context of Welfare Reform.” Urban data was gathered by the Gemstone Medical Care team using adapted surveys from the NC223 study, focusing on Bread for the City Clinic in Washington, DC, as a case study.

The Gemstone program is a four-year multidisciplinary program that joins University of Maryland undergraduate students with one faculty mentor to pursue an in-depth team research project. Dr. Bonnie Braun, Associate Professor, Department of Family Studies, University of Maryland directs the Maryland portion of the multi-state study and served as consultant to the Gemstone team.

One strength of the research is the in-depth qualitative data gathered through one-on-one interviews. These give the mothers opportunity to share their experiences – reflections that effectively bring the discussion beyond correlations and hypothetical explanations to quotations and case studies. For this discussion, along with more detailed quantitative results, please refer to our thesis. It can be found in the University of Maryland library under: "Impact of Knowledge of Community Resources, Food Security, and Satisfaction With Community on Physical and Mental Well-Being in Urban and Rural Communities," by the same authors as this brief.